



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,588	10/24/2003	Chun-An Chen	JCLA10198	9479
23900	7590	07/27/2005	EXAMINER	
J C PATENTS, INC. 4 VENTURE, SUITE 250 IRVINE, CA 92618			BUEKER, RICHARD R	
			ART UNIT	PAPER NUMBER
			1763	
DATE MAILED: 07/27/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/692,588

Applicant(s)

CHEN ET AL.

Examiner

Richard Bueker

Art Unit

1763

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claims 1 and 7, the newly added phrase "the plane of the substrate" is vague and indefinite because it lacks proper antecedent basis. It is also noted that the claims do not define the shape of the substrate in any way, and in particular the claims do not define the substrate as having a planar surface to be coated that is positioned facing an evaporation source. It is noted that an infinite number of planes pass through applicants' substrate, and any one of those planes could be considered to be a plane of the substrate. In claim 7, the phrase "a rotator driving the substrate to be rotating along an axis at the center of the substrate to define a circular trace" is vague and indefinite because it fails to make clear how the rotator defines a circular trace, and the exact scope of the recited "circular trace" is unclear. It is noted that in claim 1, the circular trace is at least required to have a center that is the same as the center of the substrate, but in claim 7 the meaning of "a circular trace" is uncertain.

Claims 1-14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 1 and 8 have been amended to recite that the projection of the delivery vector onto the plane of the substrate is parallel to the tangent to the recited point on the circular trace. It is noted however, that this claim

recitation is not in accordance with what is shown in Figs. 3 and 4 of the specification. In Figs. 3 and 4, if line S is taken to be the recited vector, then its projection onto the plane of the substrate would not be merely parallel to the recited tangent, but rather it would coincide with the recited tangent. Since both lines are in the same plane, they would actually be the same line. It appears that in order for these two recited lines to be in the same plane and to be parallel, as required by the claims as amended, the heater 220 and sources 222 would have to be in a location that is different from that shown in Fig. 4. Regarding recitations such as the recited vector and the recited projection of the vector, these are not considered to new matter per se, because they are merely describing what is inherent in the drawings and written description as filed, which is proper and acceptable.

Claims 1, 4-7 and 10-13 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kamiyama (6,340,501) (see Fig. 8) who discloses an evaporation coating method and apparatus in which a heater is located below a rotating substrate and a source supplying device supplies evaporation source material to the heater in a delivery direction. The Fig. 8 apparatus of Kamiyama inherently includes the apparatus relationships recited in the claims as amended. In the Fig. 8 apparatus the substrate can be either part 210 or part 212. A circle concentric with the center of the substrate can be defined, wherein a point on the circle is vertically above the heater, and a tangent line to the circle at said point is parallel to said delivery direction.

Art Unit: 1763

Claims 2-3 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamiyama (6,340,501) taken in view of Yamazaki (2003/0010288) (see Fig. 2A), Connell (4,310,614) (see Figs. 3 and 6), Hirokawa (5,230,923) (Fig. 16) or applicants' description of the prior art (Figs. 1 and 2 of applicants' specification), all of whom illustrate the use of a shield with an opening disposed between an evaporation source and a substrate to be coated, for defining the evaporation region on the substrate. It would have been obvious to use such a shield in the apparatus of Kamiyama.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kamiyama (6,340,501) taken in view of Hirokawa (5,230,923). Kamiyama teaches a step of delivering a source material to a heater to allow continuous vaporization for a continuous manufacturing process. Kamiyama's apparatus doesn't use a rectangular crucible as the heater. Hirokawa (see Figs. 9, 15 and 16, for example) teaches that an evaporation source material can be delivered to a rectangular loading crucible for a continuous manufacturing process. It would have been obvious to use the evaporation source supplying means and rectangular crucible heater of Hirokawa in the apparatus of Kamiyama, because it is an alternate equivalent source supplier for continuous evaporation, and Hirokawa teaches that it can successfully be used for the intended purpose of Kamiyama.

Applicants' arguments have been considered but are not directed to the new grounds of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

Art Unit: 1763

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Bueker whose telephone number is (571) 272-1431. The examiner can normally be reached on 9 AM - 5:30 PM, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parvis Hassanzadeh can be reached on (571) 272-1435. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1763

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Richard Bueker*  
Richard Bueker  
Primary Examiner  
Art Unit 1763